# RFCA Stakeholder Focus Group
# January 9, 2002
# Meeting Minutes

## INTRODUCTION AND ADMINISTRATIVE

A participants list for the January 9, 2002 Rocky Flats Cleanup Agreement (RFCA) Stakeholder Focus Group meeting is included in this report as Appendix A.

Reed Hodgin of AlphaTRAC, Inc., meeting facilitator, reviewed the purpose of the RFCA Focus Group and the meeting rules. Introductions were made.

## AGENDA

Reed reviewed the agenda:

- Task 3 Peer Review – Update
- Group Discussion of Options

## TASK 3 PEER REVIEW – UPDATE

To date, AlphaTRAC, Inc. has received one Task 3 peer review. There are a total of three and the second and third Task 3 peer reviews will be completed January 11, 2002 and January 14, 2002, respectively.

## GROUP DISCUSSION OF OPTIONS

The U.S. Department of Energy (DOE) made opening remarks regarding the *Summary of End State Options - Surface Contamination*. References were made to the *Pu-239 Isoplot (pCi/g) 1999 Kriging Analysis* map. This map illustrates surface soil contamination at Rocky Flats ranging from < = 0.1 pCi/g to > 10000.0 pCi/g, showing surface contamination existing almost exclusively in the buffer zone. There is very little surface contamination in the industrial area. The 903 Pad is of notable concern. The map shows recognizable, measurable contamination from the 903 Pad extending two to three miles to the east. Also noted by DOE was a Record of Decision (ROD) for Operable Unit 3 (OU3), which speaks to the offsite area east of Rocky Flats. As it currently stands, the ROD for Operable Unit 3 was a "no-action ROD."

The Focus Group held a discussion with the following objectives:

- Review and understand surface contaminant situation;
- List and understand options for surface contaminants cleanup;
- Identify additional information needed to understand options; and
- Discuss and understand the relationship between options and other issues and / or influences.

## Review and Understand Surface Contaminant Situation

It was concluded that surface contaminants were almost exclusively located in the buffer zone, and very little existed in the industrial area, with one exception. This exception involved the monitoring and detection of plutonium in the surface water located in the industrial area. The Focus Group felt that remediation for water protection might be necessary.

## List and Understand Options for Surface Contaminants Cleanup

### Baseline Assumptions

A discussion regarding baseline assumptions was conducted. It was determined that baseline assumptions included a Radionuclide Soil Action Level (RSAL) of 651 pCi/g representing Tier 1 Action Levels, with a budget of $40,000,000. Other factors included in baseline assumptions were an estimate of 11,000/$m^3$ of low-level waste and low-level, mixed waste requiring clean up that would impact about 5 acres.

Tier 2 Action Levels for surface cleanup are based on an RSAL of 110 pCi/g and would affect 18 acres.

A different baseline assumption was discussed based on an RSAL of 35 pCi/g. The RSAL Oversight Panel (RSALSOP) originally developed this particular RSAL in February 2000. For this baseline assumption, 45,000/$m^3$ of waste impacting approximately 50 acres would cost $82,000,000. The original baseline was ~$75,000,000. The Focus Group requested a breakdown of the new budget projections.

### 903 Pad / Lip Area

The Focus Group reviewed bounding options for the 903 Pad / Lip Area. Cleanup options ranged from cleanup of 500 pCi/g to 5 pCi/g, with a risk range of ~$10^{-4}$ to $10^{-6}$ respectively. Specific details regarding surface contamination may be found in the document titled *Summary of End State Options – Surface Contamination*. This document speaks to the following:

- The situation
- Baseline assumptions
- Surface Cleanup to Be Conducted Under all Scenarios (Not Optional)
  - 903 Pad Cleanup
  - B-Series Pond Sediments
- Surface Cleanup Activity Where Cleanup Options Exist
  - 903 Lip Area
    - Bounding Options for 903 Lip Area
      - Cleanup to 500 pCi/g
      - Cleanup to 50 pCi/g
      - Cleanup to 5 pCi/g
        - Area
        - Cost
        - Health Risk
        - Ecological Impacts
        - Stewardship
    - Ideas for Reducing Cleanup Costs to Allow More Extensive Cleanup
    - 903 Lip Area Cleanup Options to Characterize and Consider for End-State Discussion
    - Additional Information Needed for Surface Contamination Discussion

General remarks were made regarding the 903 Pad. It was speculated that 50% of the cost would be used for removal purposes and 50% of the cost would be used for disposal purposes. Ecological impacts were questioned and discussed in a general way. The Focus Group questioned the net benefit of cleaning up the 903 area and ecological impacts that involve the B-1, B-2, and B-3 pond sediments removal and the impacts on native prairie.

It was noted that a strategy might need to be developed to address some of the uncertainties associated with cleanup and the variation in costs.

## General Options with Varying Degrees of Likelihood

The Focus Group identified options that were not currently "in play" for the options development process and include:

- B ponds remediation,
- The 903 pad itself,
- Ground water,
- Current landfill (cap), and
- Solar ponds.

The Focus Group identified options that were "in play" and had low cleanup costs associated with them:

- Ash pits,
- Trench-7 and other trenches, and
- Surface water management.

The Focus Group identified options that were "in play" and had high clean up costs:

- The 903 Lip and driver question: "How far to dig?" and
- The old landfill with ~300,000/$m^3$ of waste to cleanup and uncertainties in overall approach and engineering.

## Surface Contamination Projects

The Focus Group identified surface contamination projects. These projects emphasized the cleanup of the 903 Pad and the 903 Lip.

<u>903 Pad</u>

For the excavation and removal of the 903 Pad, the cost was estimated at $35,500,000. The 903 Pad is exempt from the RSAL determination, as all of the waste will be removed.

903 Lip

Assuming that cleanup would involve digging up to 6 inches, the estimated cost is $300/m^3$. The 903 Lip was discussed at three different levels of clean up:

1. cleanup to 500 pCi/g,
2. cleanup to 50 pCi/g, and
3. cleanup to 5 pCi/g.

Methods for cleanup could involve a scraper, a vacuum, or covering with topsoil.

A general discussion was held regarding each of the cleanup levels. The discussion involved comments and questions and is summarized below.

500 pCi/g

- An area between 5 to 15 acres would be cleaned up;
- Risks to the wildlife refuge worker is $10^{-4}$ (1 in 10,000);
- More information is needed for surface water protection; and
- Stewardship may require future ecological cleanup at minimum levels.

50 pCi/g

- An area of approximately 50 acres would be cleaned up;
- Risks to the wildlife refuge worker is $10^{-5}$ (1 in 100,000);
- There is uncertainty about how this will affect surface water protection;
- Stewardship may require future ecological cleanup at minimum levels; and
- Questions about the ecology concern the timing, cost, and risk of future cleanup.

5 pCi/g

- An area of approximately 1,500 acres would be cleaned up;
- Risks to the wildlife refuge worker is $10^{-6}$ (1 in 1,000,000);

- There is uncertainty about how this will affect surface water protection; and
- Stewardship may require future ecological cleanup at low levels, with the potential that engineered controls will not be needed. Environmental monitoring will still be required.

Other general comments made about the cleanup of the 903 Lip area included the regulatory impact of the various levels of cleanup and storing the waste below certain levels on site or offsite waste disposal.

### Additional Information Needed for Surface Contamination Discussion

The RFCA Focus Group requested information on the cost of onsite disposal.

## ADJOURN

The meeting adjourned at 6:30 p.m

RFCA Stakeholder Focus Group
January 9, 2002
Meeting Minutes

# Appendix A
# Participants List

# RFCA Stakeholder Focus Group
# Meeting Agenda

**When:** **January 9, 2002 3:30 - 6:30 p.m.**

**Where:** **Broomfield Municipal Hall, Bal Swan and Zang's Spur Rooms**

3:30-3:40 Ground Rules, Agenda Review, Objectives for this Meeting

3:40-3:50 Task 3 Peer Review and Wind Tunnel Technical Review - update

3:50-4:50 Surface Contamination and Cleanup Options
- Extent and nature of surface contamination
- Uncertainties in our knowledge of surface contamination
- Baseline assumptions for surface cleanup
- 903 Pad – costs and other impacts of removal options (increments)
- Monitored Retrievable Storage in Building 371

4:50-5:00 Break

4:50-6:10 Group Discussion of Options
- Group feedback on identified options
- Additional information needed concerning options
- Other options identified by focus group

6:10–6:25 Plan for next two meetings – Task 3 Review and Subsurface Contamination Options
- February 6, 2002 – End State Continues – Subsurface
- February 20, 2002 – Task 3 Review, Response and Discussion

6:25 – 6:30 Review Meeting

6:30 Adjourn

# RFCA Stakeholder Focus Group
# Meeting Agenda

**When: January 9, 2002 3:30 - 6:30 p.m.**

**Where: Broomfield Municipal Hall, Bal Swan and Zang's Spur Rooms**

3:30-3:40 Ground Rules, Agenda Review, Objectives for this Meeting

3:40-3:50 Task 3 Peer Review and Wind Tunnel Technical Review - update

3:50-4:50 Surface Contamination and Cleanup Options
- Extent and nature of surface contamination
- Uncertainties in our knowledge of surface contamination
- Baseline assumptions for surface cleanup
- 903 Pad - costs and other impacts of removal options (increments)
- Monitored Retrievable Storage in Building 371

4:50-5:00 Break

4:50-6:10 Group Discussion of Options
- Group feedback on identified options
- Additional information needed concerning options
- Other options identified by focus group

6:10-6:25 Plan for next two meetings - Task 3 Review and Subsurface Contamination Options
- February 6, 2002 - End State Continues - Subsurface

# RFCA Stakeholder Focus Group
# Meeting Agenda

- February 20, 2002 - Task 3 Review, Response and Discussion

6:25 - 6:30 Review Meeting

6:30 Adjourn

## Objectives

- Review/Understand surface contaminant situation
- List /Understand options for surface contaminants cleanup
- Identify additional information needed to understand options
- Discuss/Understand relationship between options and other issues/influences

## Surface Contaminants

- Mostly (almost exclusively) in buffer zone
- Very little in industrial areas
- But plutonium seen in surface water there
- May need remediation for water protection

- Baseline Assumptions

- 651 pCi/g RSAL
- $40 million to cleanup
- 11,000$m^3$ of low level waste/low level waste mixed
- TRU waste – maybe a bit
- 5 acres

- For 35 pCi

- 45,000 $m^3$
- $80 – 90 million ($82 million)
- 50 acres

I - Get breakdown of $40,000,000 cost

Q: Why has cleanup cost risen from $75 million to $90 million?

- Need:

I – Information on $15 million change

I – Breakout of 903 PAD

Q for discussion: How can communities build strategy for dealing with uncertainties down the road?

- Cost ~ 50/50 removal and disposal

## Ecological Impacts

- Net benefit in 903 PAD area

- Impacts on native prairie and possibly PJM as area w.dens

- B-1, B-2, B-3 ponds sediments will be removed as part of baseline plan

- Options:
  Will likely be conducted regardless of end state scenario

Q: How will reconfiguration affect end state?

## Options

Not in play (for options development)

- B ponds remediation
- 903 PAD itself
- Ground water
- Current landfill (CAP)
- Solar ponds

## Options in play but small $

- Ash pits
- T-7 and some other trenches

- Surface water management

Options in play and big $
(10's of millions)

- 903 Lip
- (Driver – how far out to dig up)

- Old landfill
  -(~300,000m $^3$)
  -Uncertainties in overall approach and engineering
  -BaselineiCAP
  -Difficult Chi6

- Surface in industrial area

For "Not in play"

- Scope
- Baseline
- Uncertainties

I – Clarification of kriging map

I – Need kriging map for sum of ratios

Surface Contaminants "Projects"

Range of options
- Baseline
- Others
- Impacts/Influences
- Current thoughts

903 PAD

- Excavated and removed
- $ - combining baseline = $30.5 mil
- Avoid TRU
- No RSAL issue –

All will be removed

-903 LiP

- Cost ?? - $300/m$^3$
- Assume 6" cleanup? Vacuum?

At 500 pCi/g
At 50 pCi/g
At 5 pCi/g

NB: Can we get less than 6" – How?

NB: Different methods for different levels of contaminants
NB: Could waste be disposed differently?

Options

- Clean up to 500, 50, 5
- Methods
- - Scraper
- - Vacuum
- - Cover with topsoil

500 pCi

- Area – 5-15 acres, closer to 5
- Risk to wildlife refuge worker - ~ $10^{-4}$
- Surface water protection – need more information (water transport study)

Stewardship

- May require future ecological – minimal cleanup

50 Pci

- Area - ~ 50 acres
- Risk – $10^{-5}$
- Surface water depends

Stewardship
- Similar to 500

Ecological issues
- Begin
- Cost?
- Risk to worker

5 Pci

Area - ~1500 acres
Risk – $10^{-6}$
Surface water - ?
Stewardship
- Low risk of more cleanup
- Maybe no engineered controls
- Monitoring still required

Ecological – big ecological system impacts

Q – Regulatory impacts of options

Another option
- Store below certain level on site

Options to consider for Lip area
- Removal to 500, 50, 5
- Waste disposal offsite and onsite
- Onsite disposal options and cost ideas

Next

- Process waste lines and information on leaks
- UBC
- Ash pits
- T-7

15/15